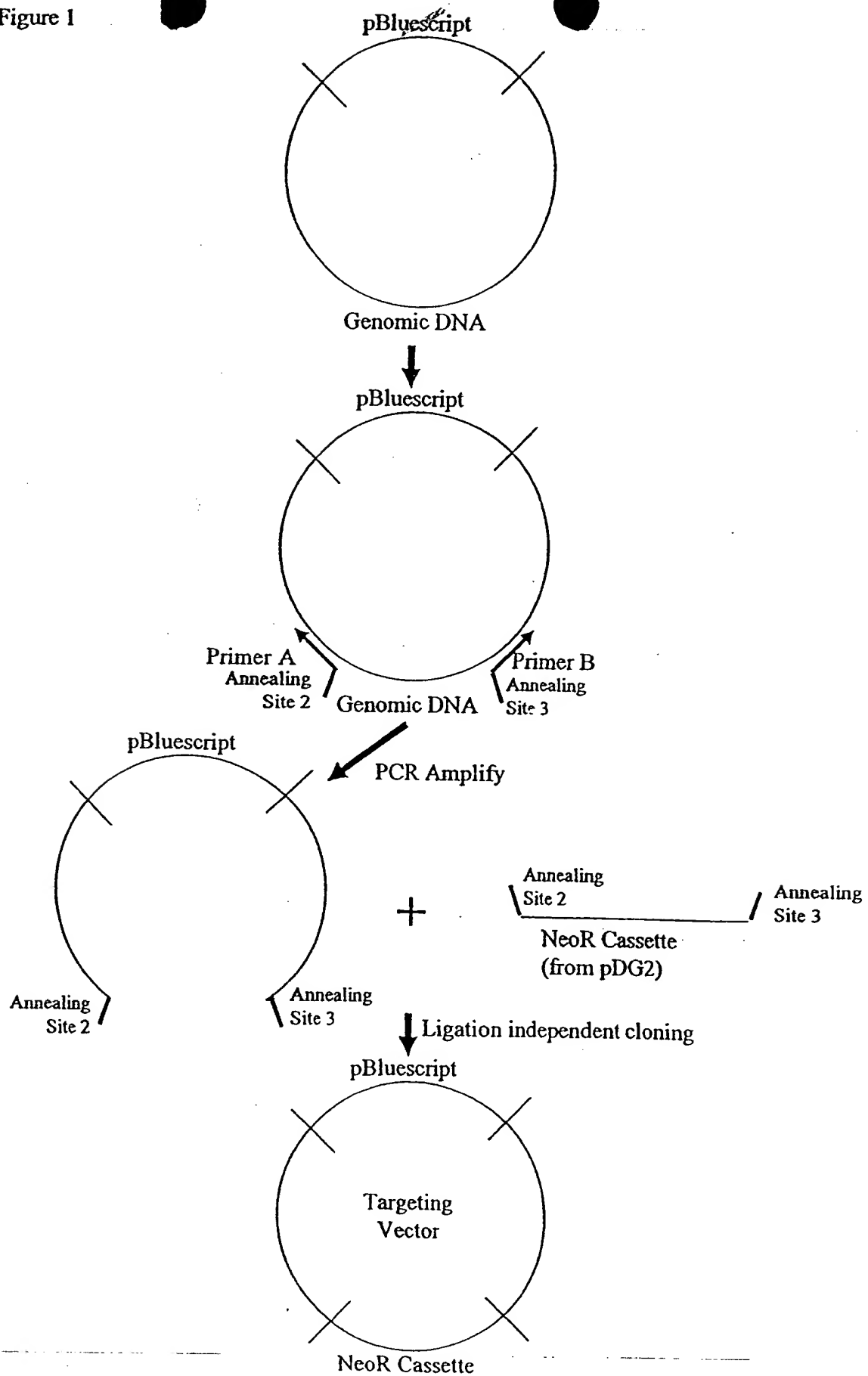


Figure 1



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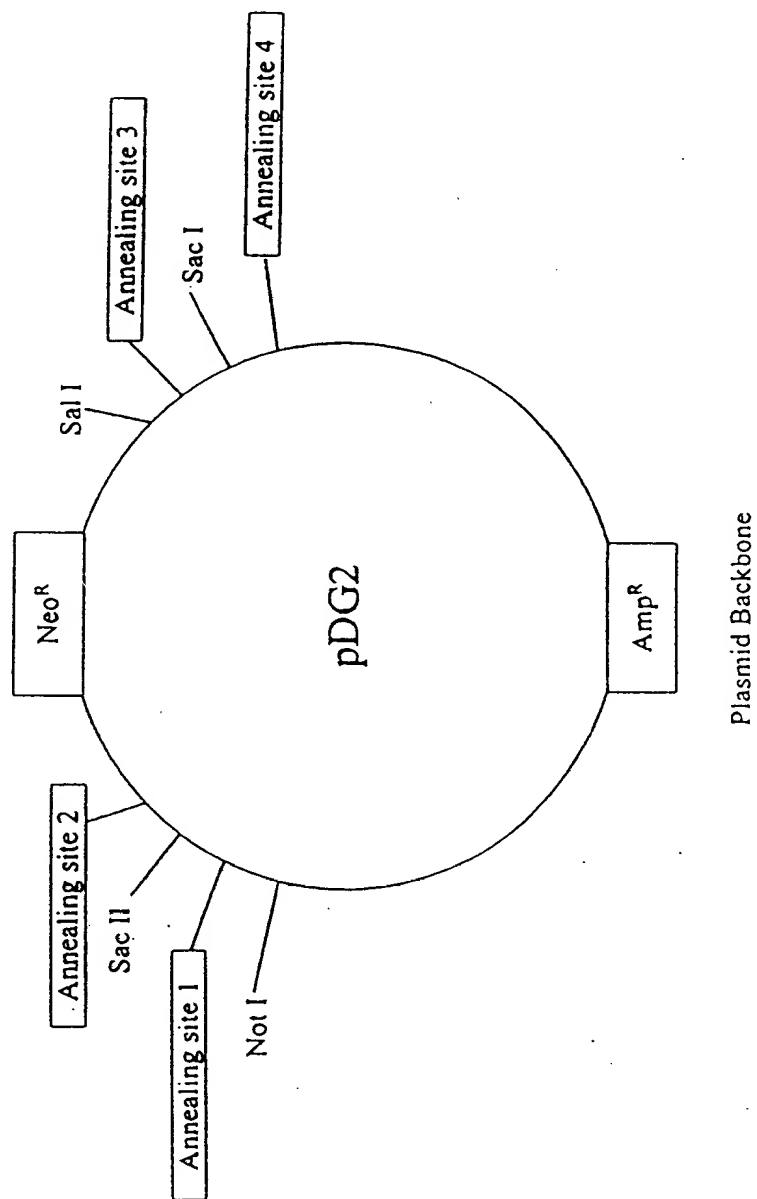


FIGURE 2A

FIGURE 2B

pDG2:

TTTAAGTACAGTACGTCAGGTGGCAGCTTTTTCGGGGAAATGTGCGCGGAACCCCTATTGTTTATTTTCTAAATACATTCAAATA
TGTATCCGCTCATGAGACAATAACCTGTATAAATGCTTCAATAATATTGAAAAAGGAAGAGTATGAGTATTCAACATTTTC
CGTGTGCGCCCTATTCCCTTTTTTTCGGGCATTTTGCCCTTCTGTTTTGCTCACCAGAAACGCTGGTGAAAGTAAAGA
TGCTGAAGATCAGTGGGTGCGCAGAGTGGGTTACATCGAACTGGATCTCAACAGCGGTAAAGATCCTTGAGAGTTTTTCGCC
CCGAAGAACGTTTCTCAATGATGAGCAGCTTTTAAAGTTCTGCTATGTGGGTCGGTATTATCCCGTGTGACGCGCGGGCAA
GAGCAACTCGGTGCGCGCATACATATTCTCAGAAAGTACTGGTTGAGTACTCAGGATCAGAGTAAGAGCATCTTACGGA
TGGCATGACAGTAAGAGAATTATGTCAGTGTCTGCCATAACCATGAGTGATAAACTGCGGCCAACTTACTTCTGACAAACGA
TCGGAGGACCGAAGGAGCTAACCGCTTTTTTGCAACAACATGGGGGATCATGTAACCTGCCTTGATCGTTGGGAACCGGAG
CTGAATGAAGCCATACCAAAACGACGAGCGTGACACCAGATGCTGTAGCAATGGCAACAACGTTGCGCAAACTATTAACT
TGGCGAACTACTTACTCTAGCTTCCCGGCAACAATTAAGACTGCGATGGAGCGGATAAAGTTGTCAGGACCACTTCTGCG
GCTCGGCCCTTCCGGCTGCTGGTTTTATGCTGATAAATCTGGAGCGGTGAGCGTGGGTCTCGCGGTATCATTGCAAGC
CTGGGGCCAGATGGTAAGCCCTCCCGTATCGTAGTTATCTACAGCAGCGGGAGTCAGGCAACTATGGATGGAACGAAATAG
ACAGATCGCTGAGATAGGTGCCTCACTGATTAAAGCATTGGTAACTGTGACAGCAAGTTTACTCATATATACTTTAGATTG
ATTTACCCCGGTTGATAATCAGAAAAGCCCCAAAAACAGGAAGATTGTATAAGCAAATTTAAATTGTAAACGTTAATA
TTTTGTAAAAATTCGCGTTAAATTTTTGTTTAAATCAGCTGATCTTTTTTAAACCAATAGGCCGAAATTCGGCAAAAATCCCTTAT
AAATCAAAAGAAATAGCCGAGATAGGTTGAGTGTGTTCCAGTTTGGAAACAGAGTCCACTATTAAGAAACGTTGGACTC
CAACGTCAAAGGGCGAAAAACCGTCTATCAGGCGGATGGGCCACTACGTGAACCATCCCAAAATCAAGTTTTTGGGGT
CGAGGTGCGGTAAAGCACTAAATCGGAACCCCTAAAGGGAGCCCCGATTAGAGCTTGACGGGGAAAGCGAACGTTGGCGA
GAAAGGAAGGGAAGAAAGCGAAAGGAGCGGGCGTAGGGCGTGGCAAGGTGATGCGGTACGCTGCGCGTAAACCACCACA
CCCGCCGCGCTTAATGCGCGCTACAGGGCGCGTAAAGGATCTAGGTGAAGATCCTTTTTGATAATCTCATGACCAAAA
TCCCTTAACTGAGTTTTCTGTTCCACTGAGCGTCAGACCCCGTAGAAAAGATCAAAGGATCTTCTTGAGATCCTTTTTTT
TCTGCGCTAATCTGCTGCTTGCACAAAGAAAAACACCGCTACAGCGGTGTTTTGTTGTCGGGATCAGAGCATACCAAC
TCTTTTTCCGAAGGTAAGTGGCTTACGAGAGCGCAGATACCAAATACTGTTCTTCTAGTGTAGCCGTAGTTAGGCCACC
ACTTCAAGAATCTGTAGCACGCTACATACCTCGCTCTGCTAATCTGTTTACCAGTGGCTGCTGCCAGTGGCGATAAG
TCGTGCTTACCGGGTTGGACTCAAGACGATAGTTACCGGATAAGGGCGAGCGGTGGGCTGAACGGGGGGTTCTGTGCAC
ACAGCCGAGCTGGAGCGCAAGCACTACCGAACTGAGATACCTACAGCGTGAGCTATGAGAAAGCGCCACGCTTCCCG
AAGGGAAGAGTGGGACAGGTTATCCGTAAGCGGCGAGGTCCGAACGAGAGAGCGACGAGGAGGCTTCCAGGGGAAAC
GCCTGGTATCTTTATAGTCTGTGCGGTTTCGCCACCTCTGACTTGAGCGTCGATTTTTGTGATGCTCGTCAGGGGGCG
GAGCTATGGA AAAACGCCAGCAACCGCGCTTTTTACGGTTCTTGGCTTTTGTGCGCTTTTGTCTCATATGTAATGTG
AGTTAGCTCACTCATTAGGCACCCAGGCTTTACATTTATGCTTCCGCTCGTATGTTGTGTGGAATTGTGAGCGGATA
ACAATTTTACACAGGAACAGTATGACCATGATTACGCCAAGCTACGTAATACGACTCACTAGGCGGCGCGTTTAAAC
AATGTGCTCTCTTTGGCTGTCTTCCGGGGCGAAGCCAGCAGACAAGAACGATGACGTCAAGCTTCCGGGACCGGTGCT
AGCGGCGCGCGAATTCTGTGAGGATTGAGGGCCCCGTGAGGTCAATTTCTACCGGTTAGGGGAGGCGCTTTTCCGAAG
CAGTCTGGAGCATGCGCTTTAGCAGCCCCGTGGCACTTGGCGCTACACAAGTGGCCTCTGGCTCGCACACATTCCACA
TCCACCGGTAGCGCAACCGGCTCGGTTCTTTGGTGGCCCCCTTGGCGCACCTTCTACTCTCTCCCTAGTCAGGAAGTTC
CCCCCGCCCCCGAGCTCGCTGCTGTCAGGACGTGACAAATGGAAGTAGCAGCTCTCACTAGTCTCGTCGAGATGGACAG
CACCGCTGAGCAATGGAAGCGGTAGGCTTTGGGGCAGCGGCCAATAGCAGCTTGTCTCTTCTGCTTTCTGGCTCAGA
GGCTGGGAAGGGGTGGGTCGCGGGCGGGCTCAGGGCGGGCTCAGGGCGGGCGGGCGGAAGGCTTCTCCGAGGCC
GGCATTCTCGCACGCTTCAAAGCGCAGCTCTGCGCGCTGTTCTCTCTCTCATCTCCGGGCTTTTCAGCTGCGAGC
CAATATGGGATCGGCCATTGAACAAGATGGATTGCACGAGGTTCTCGGCGCTTGGTGGAGAGGCTATTCCGCTATG
ACTGGGCAACAAGACAATCGCTGCTCTGATGCGCGCGTGTTCGGCTGTGACGCGAGGGGCGCCCGTCTTTTGTG
AAGACCGACCTGTCCGGTGCCTGAACTGAACTCAGGACGAGGACGCGGCTATCGTGGCTGGCCACGACGCGGCTTCC
TTGCGCAGCTGTGCTCGAGCTTGCTCAGTAAGCGGAAGGAGTGGCTGCTATGGGCGAAGTCCGGGGCAGGATCTCC
TGTCACTCACTTGTCTCTGCTCGGGAAGATATCCATCATGGCTGATGCAATGCGCGGCTGCATACGCTGTATCGGCT
ACCTGCCCATTCGACCACCAAGCGAAACATCGCATCGAGCGAGCAGTACTCGGATGGAAGCCGGTCTTGTGATCAGGA
TGATCTGGACGAAGAGCATCAGGGGCTCGCGCAGCGGAAGTGTTCGCGAGGCTCAAGGCGCGCATGCCGACGCGGATG
ATCTCGTCTGACCAATGGCGATGCTGCTTGCAGAAATCATGGTGGAAAAATGGCCGCTTTTCTGGATTATCGACTGT
GGCGGCTGGGTGTGGCGGACCGCTATCAGGACATAGCGTTGGCTACCCGCTGATATGCTGAAGAGCTTGGCGCGAATG
GCTGACCGCTTCTCGTGCTTACGTTATGCGCGCTCCGATTCGACGCGCATCGCTTATCGCTTCTTGACAGT
TCTTCTGAGGGGATCGATCCGTCTGTAAGTCTGCAGAAATTGATGATCTATTAACAATAAAGATGTCCACTAAAAATGG
AAGTTTTTCTGTCTACTTTTGTAAAGAGGTGAGAACAGAGTACTACATTTTGAATGGAAGGATTGGAGCTACGGGG
GTGGGGTGGGGTGGGATTAGATAAATGCTGCTCTTACTGAAGGCTCTTACTATTGCTTTATGATAATGTTTCATAG
TTGGATATCATAAATTTAAACAAGCAAAACCAAATTAAGGGCCAGCTCATTCTCCCACTCATAGATCTATAGATAG
TCTCTCGTGGGATCATGTTTTCTTCTGATTCCCACTTTGTGTTTCTAAGTACTGTGGTTTCAAATGTGTCAGTTTCA
TAGCTGAAGAACGAGATCAGCAGCTCTGTTCCACATCACTTACTTCTCAGTATTGTTTTGCCAAGTTCTAATCCAT
CAGAAGCTGACTCTAGATCTGGATCCGGCCAGCTAGGCGCTCGACCTCGAGTGATCAGGTACCAAGGCTCTCGCTCTGTG
TCCGTTGAGCTCGACGACACAGGACACGCAAAATTAATTAAGGCCGGCCGTAACCTCTAGTCAAGGCTTAAAGTAGTCTG
TATTACGGAATGGCGCTCGTTTTACAACGTCTGACTGGGAAAAACCTTGGCGTTACCCAACCTTAATCGCTTGCAGCA
TCCCCCTTTCCGAGCTGGCGGTAATAGCGAAGAGCCGACCGATCGCCCTTCCCAACAGTTGCGCAGCTGAATGGCG
AATGGCGCTTCTGCTGGTGAATAAGGCCCGCTTCCGGCGGCTTTTTT

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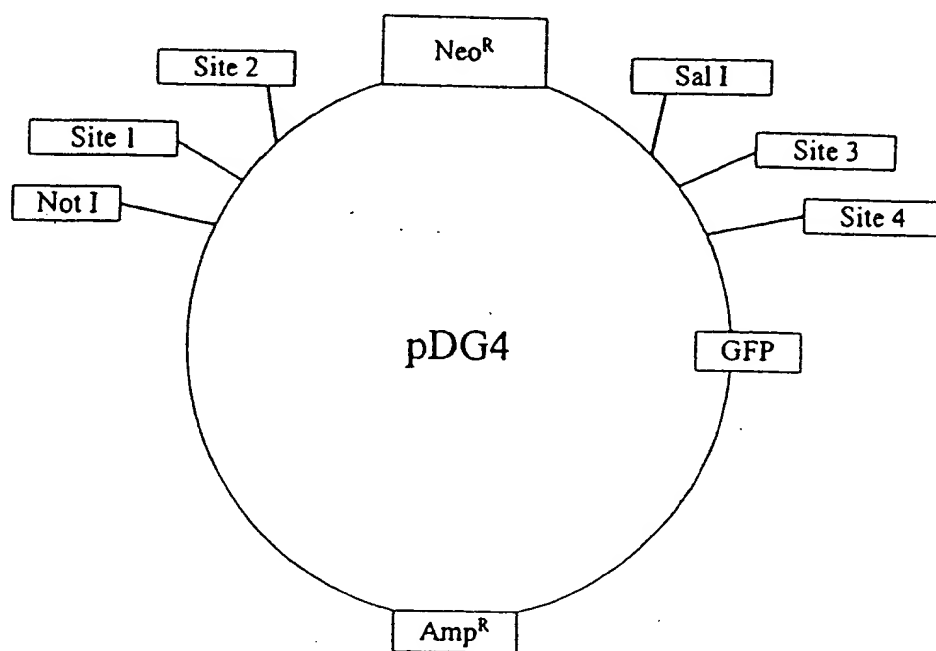


FIGURE 3A

FIGURE 3B

pDG4:

GTTTAATAGTAATCAATTACGGGGTCATTAGTTCATAGCCCATATATGGAGTTCGCGTTACATAAATTACGGTAAATGG
 CCGCCTGGCTGACCGCCCAACGACCCCGCCCATTTGACGTCAATAATGACGTATGTTCCCATAGTAACGCCAATAGGGA
 CTTTCCAATGACGTCAATGGGTGGAGTATTTACGGTAACTGTCCTTGGCAGTACATCAAGTGTATCATATGCCAAGT
 ACGCCCCCTATTGACGTCAATGACGGAATGGCCCGCTGGCATTAAAGCCAGTACATGACCTTATGGGACTTTCCTAC
 TTGGCAGTACATCTACGTATTAGTTCATCGCTATTACCATGGTGATGCGGTTTTGGCAGTACATCAATGGGCGTGGATAGC
 GGTGTGACTCAGGGGATTTCCAAGTCTCCACCCATTGACGTCAATGGGAGTTGTTTGGCACCAAAATCAACGGGAC
 TTTCCAAAATGTCGTAACAACTCCGCCCATTTGACGCAATGGGCGGTAGGCGGTACGCGTGGGAGGTCTATATAAGCAG
 AGCTGGTTTAGTGAAACCGTCAGATCCGCTAGCGCTACCGGTGCGCCACCATGGTGAGCAAGGGCGAGGAGCTGTTCAACGG
 GGTGGTGGCCATCTGGTGGAGCTGGACGGCGAGCTAAACGGCCACAAGTTGACGCGTCCGCGGAGGGCGAGGGCGATG
 CCACCTACGGCAAGCTGACCTGAAGTTCATCTGCACCAACGGCAAGCTGCCGTGCCCTGGCCACCTCGTGACCACC
 CTGACCTACGGCGTGCGAGTGTTCAGCGCTACCCCGACCATGAAGCAGCAGCACTTCTTCAAGTCCGCCATGCCCGA
 AGGCTACGTCAGGAGCGCACCATCTTCTCAAGGACGACGGCAACTACAAGACCCGCGGAGGTGAAGTTCCGAGGGCG
 ACACCCCTGGTGAACCGCATCGAGCTGAAGGGCATCGACTTCAAGGAGGACGGCAACATCCTGGGGCACAAGCTGGAGTAC
 AACTACAACAGCCACAACGTCTATATCATGGCCGACAAGCAGAAGACGGCATCAAGGTGAAGTTCAAGATCCGCCACAA
 CATCGAGGACGGCAGCGTGACGTCCGCCGACCACTACAGCAGAACACCCCATCGGCGACGGCCCCGCTGCTGCTGCCG
 ACAACCACTACCTGAGGACCCAGTCCGCCCTGAGCAAGACCCCAACGAGAAGCGCGATCAGTGGTCTGCTGGAGTTT
 GTGACCGCGCGGGATCACTCTCGGCATGGACGAGCTGTACAAGTCCGACTCAGATCCACCGGATAGATAAATGAT
 CATTAATCAGCCATACCACTTTGTAGAGGTTTACTGCTTTAAAAAACCTCCACACCTCCCCCTGAACCTGAAACATA
 AAATGAATGCAATTGTTGTTGTTAACTGTTTATTGCGCTTATAATGGTTACAAATAAAGCAATAGCATCACAAATTTT
 ACAATAAAGCATTTTTTCACTGCACTTAGTTGTGGTTTGTCCAACTCATCAATGTATCTTAACGGGAAGTACGTCA
 GGTGGCATTTTTCCGGGAAATGTGCGCGGAACCCCTATTGTTTATTCTAAATACATTCAATATGTATCCGCTCAT
 GAGACAATAACCTGATAAATGCTTCAATAATTGAAAAAGGAAGAGTATGAGTATTCAACATTTCCGTGTCGCCCTTA
 TTCCCTTTTTTGGCGCATTTTGCCTTCTGTTTGTGCTCACCAGAAACGCTGGTGAAGTAAAGATGCTGAAGATCAG
 TTGGGTGCAGCAGTGGGTTACATCGAAGTGGATCTCAACAGCGGTAAGATCCTTGAGAGTTTTGCGCCCGAAGAACGTTT
 TCCAATGATGAGCACTTTTAAAGTTCTGCTATGTGGCGCGTATTATCCGCTGTTGACGCGGGCAAGAGCAACTCGGTC
 GCGCATACACTATTCTCAGAAAGTACTGGTTGAGTACTCACCAGTCAAGAAAAGCATCTTACGGATGGCATGACAGTA
 AGAGAATTATGAGTGCTGCCATAACCATGAGTGATAACACTGCGGCCAACTTACTTCTGACAACGATCGGAGGACCGAA
 GGAGCTAACCGCTTTTTTGCAACAATGGGGGATCATGTAAGTCTGCCTTGATCGTTGGGAACCGGAGGTGAATGAAGCCA
 TACCAAAACGACGAGCGTGACACCAAGTGCCTGTAGCAATGGCAACACGTTGCGCAAACTATTAAGTGGCGAACTACTT
 ACTCTAGCTTCCCGGCAACAATTAAGACTGGATGGAGGCGGATAAAGTTGACGAGCACTTCTGCGCTCGGCCCTTCC
 GGCTGGCTGGTTTTATTGCTGATAAATCTGGAGCGGTGAGCGTGGGTCTCGCGGTATCATTTGAGCACTGGGGCCAGATG
 GTAAGCCCTCCCGTATCGTAGTTATCTACACGACGGGAGTCAAGCAACTATGGATGAACGAAATAGACAGATCGCTGAG
 ATAGGTGCCTCACTGATTAAAGCATTGGTAAGTGTGACACCAAGTTTACTCATATATCTTATGATTGATTTACCCGGTT
 GATAATCAGAAAAGCCCCAAAACAGGAAGATTGTATAAGCAATATTAAATTTGTAACGTTAATAATTTGTTAAATTT
 CGCGTTAAATTTTTGTTAAATCAGCTCATTTTTTAACCAATAGGCGGAAATCGGCAAAATCCCTTATAAATCAAAAGAA
 AGCCCGAGATAGGGTTGAGTGTGTTCCAGTTTGGAAACAGAGTCCACTATTAAAGAACGTTGAGTCCAAACGTCAGAGGG
 CGAAAAACCGTCTATCAGGGCGATGGCCCACTACGTGAACCATCACCCAAATCAAGTTTTTGGGGTGGAGGTGCCGTAA
 AGCACTAAATCGGAACCTTAAAGGGAGCCCCGATTTAGAGCTTGACGGGGAAGCGAACCTGGCGAGAAAGGAAGGGAA
 GAAAGCGAAAGGAGCGGGCGCTAGGGCGCTGGCAAGTGTAGCGGTACCGCTGCAACCCAGCACCGCGCGCTTAA
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 GGTGCTTGCAACAAAAAACACCGCTACCAGCGGTGGTTGTTGTCGGGATCAAGAGCTACCAACTCTTTTTCCGAAG
 GTAAGTGGCTTCAGCAGAGCGCAGATACCAAACTAGTGTCTTCTAGTGTAGCGGTAGTTAGGCCACCACTTCAAGAACTC
 TGTAGCACCGCTACATACCTCGCTCTGCTAATCCTGTTACAGTGGCTGCTGCCAGTGGCGATAAGTGGTCTCTTACCG
 GGTGGACTCAAGACGATAGTTACCGGATAAGGCGCAGCGGTGCGGCTGAACGGGGGTTCTGTCACACAGCCAGCTTG
 GAGCGAACGACCTACACCGAACTGAGATACCTACAGCGTGAGCTATGAGAAAGCGCCACGCTTCCCGAAGGGAGAAAGGC
 GGACAGGTATCCGGTAAGCGGCAGGGTCGGAACAGGAGAGCGCAGGAGGAGCTTCAGGGGAAACGCGCTGGTATCTTT
 ATAGTCTGTGCGGTTTCCGCACTCTGACTTGAGCGTCGATTTTGTGATGCTCGTCAAGGGGGCGGAGCCTATGGA
 AACGCCAGCAACGCGGCTTTTTACGGTTCTGCGCTTTTGTGCTGCTTCTGCTCATGTAATGTGAGTTAGCTCACTC
 ATTAGGCACCCAGGCTTTACACTTTATGCTTCCGGCTCGTATGTTGTGTGGAATTGTGAGCGGATAACAAATTTACACA
 GGAACAGCTATGACCATGATTACGCCAAGCTACGTAATACGACTCACTAGGCGGCGCGTTTAAACAATGTGCTCCTCT
 TTGGCTTGCTTCCGCGGCGCAAGCCAGACAAGAACAGTTGACGTCAAGCTTCCCGGACGCGTCTAGCGGCGCGCGGA
 ATTCTGCGAGGATTCGAGGGCCCCGTCAGGTCAATTCTACCGGTAGGGGAGGCGCTTTTCCCAAGGCAGTCTGGAGCAT
 GCGCTTTAGCAGCCCCGCTGGCACTTGGCGCTACACAAGTGGCTCTGCGCTCGCACACATTCCACATCCACCGGTAGCG
 CCAACCGGCTCCGTTCTTTGGTGGCCCCCTTCGCGCCACCTTCTACTCTCCCTAGTCAAGAGTTCCCCCGCGCCCGC
 AGCTCGCGTCTGTCAGGACGTGACAAATGGAAGTAGCAGCTCTCACTAGTCTCGTGCAGATGGACAGCACCGCTGAGCAA
 TGGAAAGCGGTAGGCTTTGGGGCAGCGGCAATAGCAGCTATTGCTCTTCTGCTTCTGCGCTCAGAGGCTGGGAAGGGG
 TGGGTCCGGGGCGGGCTCAGGGGCGGGCTCAGGGGCGGGCGGGCGGAAGGTCCTCCGAGGCGCGGCTTCTCGCAC
 GCTTCAAAAGCGCAGCTGCGCGCGTGTCTCTCTCTCTCATCTCCGGGCTTTTCGACCTGCAGCCAATATGGGATCG
 GCCATTGAACAAGATGGATTGCAGCAGGTTCTCCGGCCGCTGGGTGGAGAGGCTATTCCGCTATGATGGGCAACA
 GACAAATCGGCTGCTCTGATGCGCGGTGTTCCGGCTGTCAGCGAGGGCGCCGGTCTTTTGTCAAGACCGAAGCTGT
 CCGGTGCCCTGAATGAAGTGCAGGACGAGGCGCGGTATCGTGGCTGGCCACGAGCGGGCTTCTTGGCGAGCTGTG
 CTCGACGTTGCTACTGAAGCGGAAGGACTGGCTGCTATTGGGCGAAGTGCGGGGCGAGATCTCTGTCTCATCTCACT

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TGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATGCGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCC
 ACCACCAAGCGAAACATCGCATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTGATCAGGATGATCTGGACGAA
 GAGCATCAGGGGCTCGCGCCAGCCGAACCTGTTGCCAGGCTCAAGGCGCGCATGCCGACGGCGATGATCTCGTCGTGAC
 CCATGGCGATGCTGCTTGCCGAATATCATGGTGGAAAAATGGCCGCTTTTCTGGATTATCGACTGTGGCCGGCTGGGTG
 TGGCGGACCGCTATCAGGACATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
 CTGCTGCTTTACGGTATCGCCGCTCCCGATTGCGAGCGCATCGCCTTCTATCGCCTTCTTGACGAGTTCTTCTGAGGGGA
 TCGATCCGTCTGTAAAGTCTGCAGAAATTGATGATCTATTAACAATAAAGATGTCCACTAAAATGGAAGTTTCTCTGT
 CATACTTTGTTAAGAAGGGTGAGAACAGAGTACCTACATTTTGAATGGAAGGATTGGAGCTACGGGGGTGGGGGTGGGGT
 GGGATTAGATAAATGCCTGCTCTTTACTGAAGGCTCTTTACTATTGCTTTATGATAATGTTTCATAGTTGGATATCATAA
 TTAAACAAGCAAAACCAAAATTAAGGGCCAGCTCATTCTCCCACTCATGATCTATAGATCTATAGATCTCTCGTGGGAT
 CATTGTTTTTCTCTTGATTCCCACTTTGTGGTTCTAAGTACTGTGGTTTCCAAATGTGTCAGTTTCATAGCCTGAAGAAC
 GAGATCAGCAGCCTCTGTTCCACATACACTTCATTCTCAGTATTGTTTTGCCAAGTTCTAATTCATCAGAAGCTGACTC
 TAGATCTGGATCCGGCCAGCTAGGCCGTGACCTCGAGTGATCAGGTACCAAGGCTCTCGCTCTGTGTCCGTGAGCTCG
 ACGACACAGGACACGCAAAATTAATTAAGGCCGGCCCGTACCCTCTAGTCAAGGCCCTAAGTGAGTCGTATTACGGACTGG
 CCGTCTGTTTTACAACGTCGTGACTGGGAAAAACCTGGCGTTACCCAACTTAATCGCCTTGACGACATCCCCCTTTCGCC
 AGCTGGCGTAATAGCGAAGAGGCCCGCACCGATCGCCCTTCCCAACAGTTGCGCAGCCTGAATGGCGAATGGCGCTTCGC
 TTGGTAATAAGCCCGCTTCGGCGGGCTTTTTTTT

FIGURE 3B (Continued)

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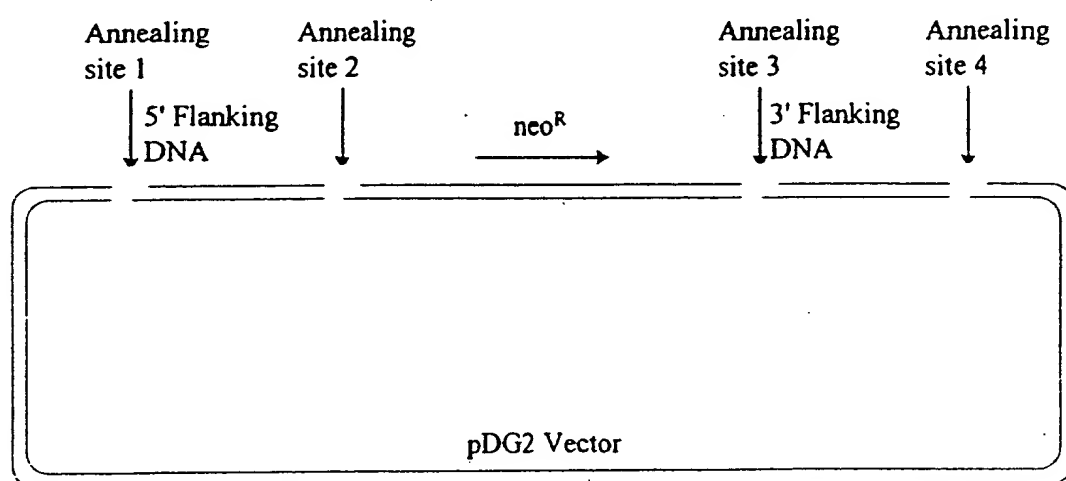
Annealing site	Sequence	Sequence after digestion
1	5' tgtgctcctctttggcttgcttccaa... 3' 3' acacgaggagaaaccgaacgaaggtt... 5'	5' tgtgctcctctttggcttgcttccaa... 3' 3' tt... 5'
2	5' ctggttcttctgtctggcttgccccaa... 3' 3' gaccaagaacagaccgaaccgggtt... 5'	5' ctggttcttctgtctggcttgccccaa... 3' 3' tt... 5'
3	5' ggctcctcgctctgtgtccgttgaa... 3' 3' ccaggagcgagacacacaggcaactt... 5'	5' ggctcctcgctctgtgtccgttgaa... 3' 3' tt... 5'
4	5' ttgctgtgtcctgtgtcgtcgaa... 3' 3' aacgcacaggacacagcagcgtt... 5'	5' ttgctgtgtcctgtgtcgtcgaa... 3' 3' tt... 5'

FIGURE 4

Annealing site	Sequence	Sequence after digestion
1	5' AAtgtgtcctcttcttggcttgcctccgc 3' 3' Ttacacgaggagaaaccgaacgaagg 5'	5' AA 3' Ttacacgaggagaaaccgaacgaagg 5'
2	5' AActgggttcttgtctggcttggccgc 3' 3' Ttgaccaagaacagaccgaaccggg 5'	5' AA 3' Ttgaccaagaacagaccgaaccggg 5'
3	5' AAggtcctcgtctgtgtccgttgagct 3' 3' Ttccaggagcgagacacagggaac 5'	5' AA 3' Ttccaggagcgagacacagggaac 5'
4	5' AAtttgcgtgtcctgtgtcgtcagct 3' 3' Ttaaacgcacaggacacagcagc 5'	5' AA 3' Ttaaacgcacaggacacagcagc 5'

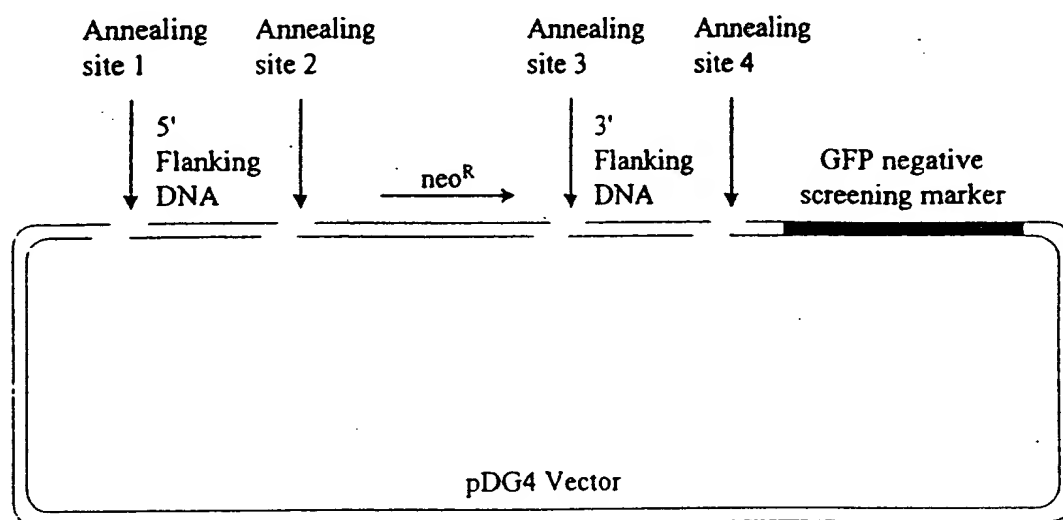
FIGURE 5

FIGURE 6



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FIGURE 7



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TCCCCACATTGCAAAGCCTACACAAAGATCCCTACCACTGAGCACCGAGGGAGGCATGGCTCAGAACCCC
 AGCAACATGGAGCCCTTGCGTAAACCACTGGTGCCCTGTGAAGGGAATCCCACTCATCAAATACTTTGCGG
 AGACAATGGAGCAACTGCAGAACTTCACAGCCTGGCCTGATGATGTGCTCATCAGCACGTACCCAAAGTC
 TGGTACTAACTGGATGAGTGAGATCATGGATATGATCTATCAGGGTGGCAAGCTAGATAAGTGTGGCCGG
 GCCCCCGTCTATGCCCGGATACCCCTTCCTTGAGTTCAGCTGCCCAGGGGTCCCCCAGGTCTTGAAACTC
 TGAAAGAGACACCAGCCCCACGGATCATTAAAGACACATCTGCCCTTGTCCTTACTCCCTCAGAGTCTGCT
 GGATCAAAAGATCAAGGTGATCTACGTTGCCCGAAATGCAAAGGATGTGGTTGTCTCCTATTATAACTTC
 TACAAAATGGCCAAGCTGCACCCTGACCCAGGCACCTGGGAAAGCTTCTTGAGAACTTCATGGATGGGA
 AAGTGTCTTATGGGTCGTGGTACCAGCACGTGAAGGAGTGGTGGGAGCTGAGACGCACTCACCTGTTCT
 CTATCTCTTCTATGAAGACATGAAGGAGAATCCCAAAGGGAGATCAAGAAGATTCTAGAGTTTCTGGGG
 CGCTCTTACCTGAGGAGACTGTGGATTTAATTGTTTACCACACATCCTTCAAGAAAATGAAGGAGAACC
 CCATGGCTAACTACACAACCATCCCACTGAAGTTATGGACCACACTATTTATCCCTTCATGAGGAAAGG
 TACCATTGGGGACTGGAAAAATACCTTCACTGTAGCCAGAGTGAGCACTTTGATGCCCACTATGCCAAG
 CTAATGACAGGTTGTGACTTCACGTTCCGCTGTCAAATATGAATTGTGGATATGGCTATACTGGGAACCA
 AGGCAAGCTGACACATCCCCATCATGATCTCAAGAGAAAAATGTGATGTGTTTCAATTTGTTGTATGCCT
 AAAGGAAATCTGAGCTAAGAGAATAGGACTGGGATGTAGCTGAGGCAGAGGGTCTTATGAACATGTCAGG
 AAAGCCATCAGTCTTAACACTGAAAAAGAACCTAAAGTACAAACATGCAAAATAGTAAGATAAACTGTA
 TTTTACCTGAACAAATAAATGCCACTGGGAGCTGACTGG

(SEQ ID NO: 19)

Targeting Vector (5' arm; 200 bp flanking neo insert):

AGAACCCTGCCCTACTCCACCTCCTCCCTTTTTGTTTCTGGAGAACAGCCAGTCCTAG
 CACTGTTTCCACTTCCCTCCACTTGGGACACAAAATCTCCAGCTCAAAGACCAATTCTG
 CATTCCCCACATTGCAAAGCCTACACAAAGATCCCTACCACTGAGCACCGAGGGAGG
 CATGGCTCAGAACCCCAGCAACATG

(SEQ ID NO: 20)

Targeting Vector (3' arm; 200 bp flanking neo insert):

AGGGTGGCAAGCTAGATAAGTGTGGCCGGGGCCCCCGTCTATGCCCGGATACCCCTCC
 TTGAGTTCAGCTGCCCAGGGGTCCCCCAGGTATGTGCATGGGGGTGCTAGAGACAA
 GTGGAAAAAGGTAGGACCGGGCCCCAGTTTAAACAAAGTTCTTGTTCAACTTAGGTCT
 TGAAACTCTGAAAGAGACACCAGCCCCA

(SEQ ID NO: 21)

FIG. 8